

Noise Levels

Noise Levels

- Traffic noise levels are measured in Aweighted decibels (dBA), which most closely approximate the way the human ear hears sounds at different frequencies.
- Since traffic noise varies over time, the sound levels are expressed as "equivalent levels" or L(eq), representing the average sound level.
- The figure shows the noise levels of commons sounds for reference.

Definition of Noise Impact

- 66 dBA or more for residences, schools, and churches
- 71 dBA or more for businesses
- OR 10 dBA or more above the existing noise level

	Air raid	140		
Jet Takeoff (200 ft) Car horn (3 ft) Heavy truck (50 ft)	siren Earphones	130		
	at loud level Boom stereo in car Rock	120		Maximum vocal effort
		110		
	music Chain	100		Very annoying
	saw Lawn	90		Permanent damage begins after 8-hours
City Bus (50 ft) Train (50 ft) Freeway traffic (50 ft)	mower Average	80		Annoying
	factory Vacuum	70		
	cleaner	60		Intrusive
Light traffic (50 ft)	Normal conversation	50		Quiet
Light traffic (100 ft)	Rainfall Quiet	40		
	room	30		Very quiet
	Quiet rural area	20		
	Whisper	10		
	Normal breathing	0		
		U		

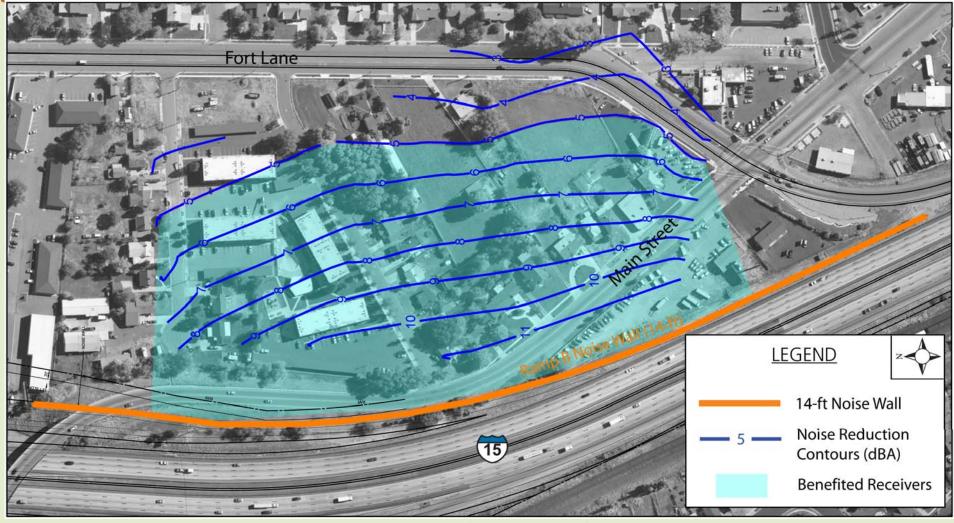


Noise Walls

- Noise Walls must meet specific requirements:
 - They reduce noise by at least 5 dBA for at least
 75% of the front-row (adjacent) receivers
 - —They can be built
 - They are cost effective (not to exceed \$30,000 per benefited receiver)
 - Balloting results favor noise walls



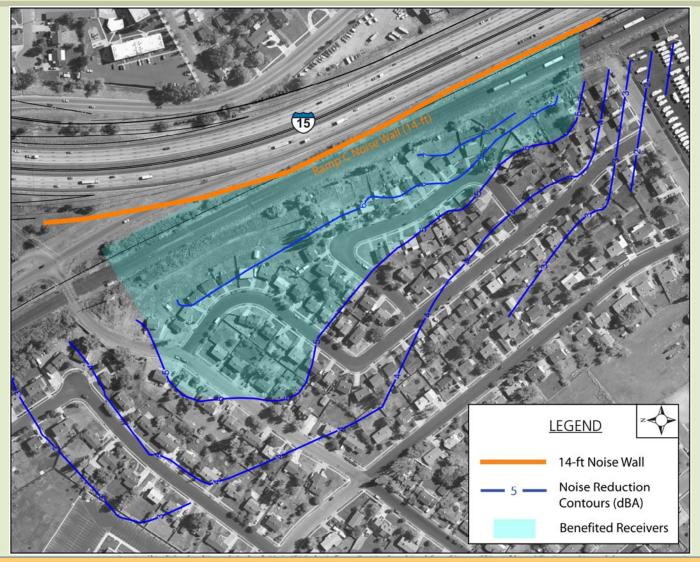
Proposed Noise Wall (Ramp B)



Construction of noise wall to be determined by public balloting. Not all benefited receivers will receive a ballot. To receive a ballot, a receiver must be impacted *and* benefited by the potential noise wall, or be located adjacent to the potential noise wall. Noise balloting areas will be determined during final design.



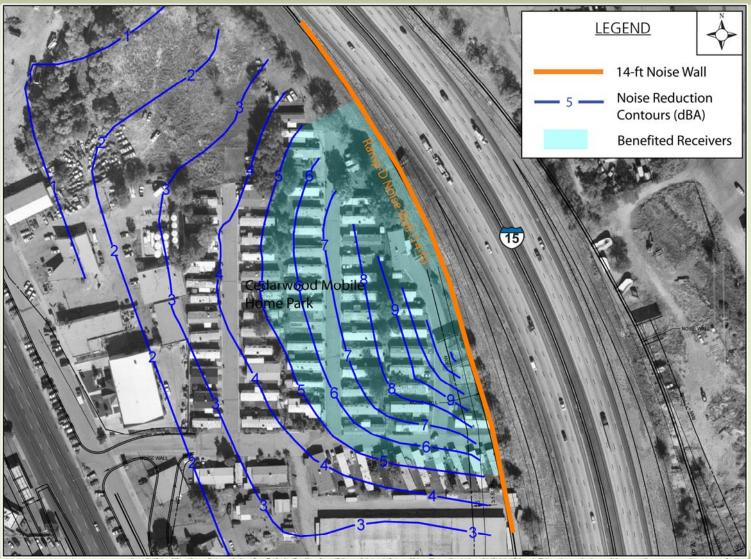
Proposed Noise Wall (Ramp C)



Construction of noise wall to be determined by public balloting. Not all benefited receivers will receive a ballot. To receive a ballot, a receiver must be impacted **and** benefited by the potential noise wall, or be located adjacent to the potential noise wall. Noise balloting areas will be determined during final design.



Proposed Noise Wall(Ramp D)



Construction of noise wall to be determined by public balloting. Not all benefited receivers will receive a ballot. To receive a ballot, a receiver must be impacted *and* benefited by the potential noise wall, or be located adjacent to the potential noise wall. Noise balloting areas will be determined during final design.



Balloting

- Balloting must be completed for all noise walls under consideration
 - Noise abatement will only be recommended if 75 percent of the following groups of residents/land owners vote, through balloting, in favor of the abatement:
 - Front row (adjacent) receivers,
 - Receivers that would be impacted by the project and benefited by noise abatement
 - At least 50% of the total number of completed ballots must be received

If the property owners vote to reject construction of a noise abatement device, their area will not be reconsidered for future noise abatement unless a future transportation project falls under the guidelines of a Type I Project for noise abatement.